

REMARKS

This responds to the Office Action mailed on January 25, 2006.

Claims 1, 6, 10, 16, 21, and 26 are amended, no claims are canceled, and no claims are added; as a result, claims 1-4, 6-8, 10-11, 14, 16-22, 24, and 26-27 remain pending in this application.

Information Disclosure Statement

On the 1449 Form filed on November 25, 2003, the Examiner did not initial the first listed reference (US 2002/0081770 A1). Applicant respectfully requests that the Examiner mark this reference as being considered and return the initialed copy with the next official communication. A copy of the initialed 1449 as returned by the Patent Office is enclosed with this response.

§102/§103 Rejection of the Claims

Claims 1-4, 6-8, 10-11, 14, 16-22, 24, and 26-27 were rejected under 35 USC § 102(e) as being anticipated by Dahl et al. (U.S. 2002/0130407), or in the alternative, under 35 U.S.C. 103(a) as obvious over Dahl et al. (U.S. 2002/0130407) taken with Tachikawa (Title "Assembly and Packaging", pp. 530-584, 1986). Applicant does not admit that Dahl is indeed prior art and reserves the right to swear behind this reference at a later date. Nevertheless the Applicant believes that the pending claims are distinguishable from the reference for at least the following reasons.

The rejection states that Dahl teaches "integrally forming a substantially planar heat transfer conducting layer 620 on the backside surface of the semiconductor chip 601." Dahl appears to show a heat transfer film 620 containing diamondoids. However Applicant is unable to find in Dahl integrally forming a substantially planar heat conducting layer on only a computationally intensive portion of a backside surface of the semiconductor chip.

In contrast, claim 1, as amended includes integrally forming a substantially planar heat conducting layer on only a computationally intensive portion of a backside surface of the semiconductor chip. Independent claims 6, 10, 16, 21, and 26 include similar claim recitations.

Support for the amendments can be found in the specification in general, and specifically in Figure 5, and on page 9, lines 30-31 – page 10, lines 1-3.

Because the Dahl reference does not show every element of Applicant's independent claims, a 35 USC §102(e) rejection is not supported. Further, Applicant respectfully submits that Tachikawa does not cure the rejection based on Dahl for at least the reasons outlined above. Reconsideration and withdrawal of the rejection are respectfully requested with respect to claims 1-4, 6-8, 10-11, 14, 16-22, 24, and 26-27.

Claims 1, 3-4, 6-8, 10, 16-19, and 21 were rejected under 35 USC § 102(b) as being anticipated by Anschel et al. (U.S. 4,914,551). The rejection states that Anschel teaches "integrally forming a substantially planar heat transfer conducting layer 41 on the backside of the semiconductor chip 17 (Figs 2, 1)."

Anschel appears to show diamond filled epoxy utilized as an adhesive. However Applicant is unable to find in Anschel integrally forming a substantially planar heat conducting layer on only a computationally intensive portion of a backside surface of the semiconductor chip. In contrast, claim 1, as amended includes integrally forming a substantially planar heat conducting layer on only a computationally intensive portion of a backside surface of the semiconductor chip. Independent claims 6, 10, 16, and 21 include similar claim recitations.

Because the Anschel reference does not show every element of Applicant's independent claims, a 35 USC §102(b) rejection is not supported. Reconsideration and withdrawal of the rejection are respectfully requested with respect to claims 1, 3-4, 6-8, 10, 16-19, and 21 .

§103 Rejection of the Claims

Claims 2, 11, 22, and 26 were rejected under 35 USC § 103(a) as being unpatentable over Anschel et al. (U.S. 4,914,551) taken with Bertin et al. (U.S. 6,255,899). Applicant respectfully submits that the additional reference of Bertin fails to cure the rejection based on Anschel for at least the reasons outlined above.

Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC §103(a) rejection is not supported by the

references. Reconsideration and withdrawal of the rejection are respectfully requested with respect to claims 2, 11, 22, and 26.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6944 to facilitate prosecution of this application.

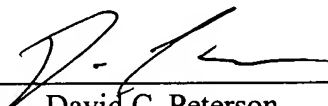
If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

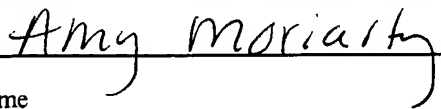
MICHAEL O'CONNOR ET AL.

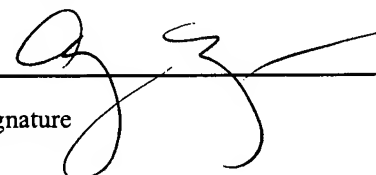
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IDS - 11-25-2003
10/721722

Substitute for form 1449A/PTO
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Use as many sheets as necessary)

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Complete if Known

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| Application Number | Unknown 10/721722 |
| Filing Date | Even Date Herewith |
| First Named Inventor | O'Connor, Michael |
| Group Art Unit | Unknown 2822 |
| Examiner Name | Unknown |

Sheet 1 of 1

Attorney Docket No: 884.398US2

| US PATENT DOCUMENTS | | | | | | |
|---------------------|---------------------|------------------|---|-------|----------|----------------------------|
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| Examiner Initials * | Foreign Document No | Publication Date | Name of Patentee or Applicant of cited Document | Class | Subclass | T ² |

| OTHER DOCUMENTS - NON PATENT LITERATURE DOCUMENTS | | | | |
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| Examiner Initials * | Cite No ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | |

EXAMINER

Michael Tran

DATE CONSIDERED

6/26/05

Substitute Disclosure Statement Form (PTO-1448)
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached.